IN THE CLAIMS

1. (Original) In a semiconductor device of the type comprising a via wherein said via comprises a layer of titanium placed over a layer of anti-reflective coating (ARC) titanium nitride, a method for preventing a contaminant within said layer of anti-reflective coating (ARC) titanium nitride from combining with portions of said layer of titanium, said method comprising the steps of:

applying a nitrogen plasma to said layer of titanium; and

converting said layer of titanium to a first layer of titanium nitride;

wherein said contaminant does not chemically react with said first layer of titanium nitride.

2. (Original) The method as set forth in Claim 1 wherein said contaminant within said layer of anti-reflective coating (ARC) titanium nitride is fluorine.

3. (Original) The method as set forth in Claim 2 wherein said fluorine becomes embedded in said layer of anti-reflective coating (ARC) titanium nitride during a partial etch procedure of said layer of anti-reflective coating (ARC) titanium nitride.

4. (Original) The method as set forth in Claim 1 wherein said step of applying said nitrogen plasma to said layer of titanium increases a temperature of said semiconductor device to a temperature of approximately four hundred degrees Centigrade.

5-20. (Canceled).

21. (Previously Presented) In a semiconductor device of the type comprising a via wherein said via comprises a layer of titanium placed over a layer of anti-reflective coating (ARC) titanium nitride, a method for preventing a contaminant within said layer of anti-reflective coating (ARC) titanium nitride from combining with portions of said layer of titanium, said method comprising the steps of:

providing a substrate for said semiconductor device;

placing a metal layer over said substrate;

placing a layer of anti-reflective coating (ARC) titanium nitride over said metal layer;

placing a dielectric layer over said layer of anti-reflective coating (ARC) titanium nitride;

performing a mask and etch procedure to etch through said dielectric layer and to partially etch through said layer of anti-reflective coating (ARC) titanium nitride to form a via passage;

depositing a layer of titanium over exposed portions of said dielectric layer and over exposed portions of said layer of anti-reflective coating (ARC) titanium nitride;

applying a nitrogen plasma to said layer of titanium; and

converting said layer of titanium to a first layer of titanium nitride wherein said contaminant does not chemically react with said first layer of titanium nitride.

22. (Previously Presented) The method as set forth in Claim 21 wherein said contaminant within said layer of anti-reflective coating (ARC) titanium nitride is fluorine.

23. (Previously Presented) The method as set forth in Claim 22 wherein said fluorine becomes embedded in said layer of anti-reflective coating (ARC) titanium nitride during a partial etch procedure of said layer of anti-reflective coating (ARC) titanium nitride.

24. (Previously Presented) The method as set forth in Claim 21 wherein said step of applying said nitrogen plasma to said layer of titanium increases a temperature of said semiconductor device to a temperature of approximately four hundred degrees Centigrade.

25. (Previously Presented) The method as set forth in Claim 21 wherein an electrical resistance of said first layer of titanium nitride does not significantly increase during a subsequent thermal cycle.

26. (Previously Presented) The method as set forth in Claim 21 wherein a volume of said first layer of titanium nitride does not significantly increase during a subsequent thermal cycle.

27. (Previously Presented) The method as set forth in Claim 21 further comprising the steps of:

depositing a second layer of titanium nitride over said first layer of titanium nitride;

depositing a layer of metal over said second layer of titanium nitride; and

filling said via passage with said layer of metal.

28. (Previously Presented) The method as set forth in Claim 1 further comprising the steps of:

depositing a second layer of titanium nitride over said first layer of titanium nitride;

depositing a layer of metal over said second layer of titanium nitride; and

filling said via passage with said layer of metal.

29. (Previously Presented) The method as set forth in Claim 28 wherein said contaminant within said layer of anti-reflective coating (ARC) titanium nitride is fluorine.

30. (Previously Presented) The method as set forth in Claim 1 wherein one of an electrical resistance of said first layer of titanium nitride and a volume of said first layer of titanium nitride does not significantly increase during a subsequent thermal cycle.

31. (Previously Presented) In a semiconductor device of the type comprising a via wherein said via comprises a layer of titanium placed over a layer of anti-reflective coating (ARC) titanium nitride, a method for preventing fluorine within said layer of anti-reflective coating (ARC) titanium nitride from combining with portions of said layer of titanium, said method comprising the steps of:

applying a nitrogen plasma to said layer of titanium; and

converting said layer of titanium to a first layer of titanium nitride;

wherein said fluorine does not chemically react with said first layer of titanium nitride.

32. (Previously Presented) The method as set forth in Claim 31 wherein said fluorine becomes embedded in said layer of anti-reflective coating (ARC) titanium nitride during a partial etch procedure of said layer of anti-reflective coating (ARC) titanium nitride.

33. (Previously Presented) The method as set forth in Claim 31 wherein said step of applying said nitrogen plasma to said layer of titanium increases a temperature of said semiconductor device to a temperature of approximately four hundred degrees Centigrade.

34. (Previously Presented) The method as set forth in Claim 31 wherein an electrical resistance of said first layer of titanium does not significantly increase during a subsequent thermal cycle.

35. (Previously Presented) The method as set forth in Claim 31 wherein a volume of said first layer of titanium nitride does not significantly increase during a subsequent thermal cycle.

36. (Previously Presented)The method as set forth in Claim 31 further comprising the steps of:

depositing a second layer of titanium nitride over said first layer of titanium nitride;

depositing a layer of metal over said second layer of titanium nitride; and

filling said via passage with said layer of metal.